The current application to application interfaces utilize ASC X12 transaction sets to pass EDI access information between requestor (CLEC) and provider (SWBT, PB/NB, Ameritech or SNET).

The SWBT, PB/NB and SNET regions utilize the 850, 855, and 997 transaction sets. A typical pre-ordering transaction begins when a CLEC submits an 850 transaction. When the 850 is received, a 997 transaction is immediately returned to the CLEC to communicate the receipt of the request. Responses, whether positive or negative, are returned to the CLEC via an 855 transaction. The CLEC may return a 997 transaction to communicate the receipt or rejection of the 855.

Ameritech Illinois utilizes the 850, 855, and 864 transaction sets. A typical pre-ordering transaction begins with the receipt of an 850 transaction from a CLEC. A 997 transaction is not used to communicate receipt of the 850. Responses, whether positive or negative, are returned to the CLEC via an 855 transaction or an 864 transaction. The 864 transaction is used to return Customer Service Information (CSI) to the CLEC. Ameritech Illinois does not require a CLEC to return a 997 transaction.

Functions

Pre-ordering functions allow for the exchange of certain information between Ameritech Illinois and CLECs for the purposes of submitting accurate requests for local service. This exchange of information is performed based on an inquiry and response process. The following pre-ordering functions are each used in one or more SBC regions.

Address Validation Inquiry
This function is used to verify an end user address provided by the requesting CLEC, and is performed to ensure subsequent local service requests contain a valid address.

This function is available in the SWBT and PB/NB regions via the EDI/CORBA, DataGate and Verigate interfaces. Similarly, address validation is performed in the SNET region via the application to application interface and W-CIWin. In the SWBT and PB/NB regions, working telephone number (WTN) may also be used to retrieve a valid residential service address. In addition to the address validation information, supplemental information is returned in each operating region such as tax area codes and the primary NXX of the local service office. This information varies by operating region because it does not equally reside in the regional backend OSS that is performing the address validation function.

Ameritech Illinois provides this function via the application to application interface and TCNet.

Common Language Location Indicator (CLLI) Inquiry
This function provides the CLLI code associated with a telephone number, and enables the CLEC to submit the appropriate CLLI code on a local service request for stand-alone UNE switch port or a UNE loop and switch port combination.

This function is available in the SWBT region via the DataGate and Verigate interfaces. In the PB/NB region, this same information is provided with the information provided via the Feature/Service Availability function via DataGate and Verigate. This function is not supported in the SNET region.

This function is not supported in Ameritech Illinois. CLLI information is provide by Ameritech Illinois to CLECs manually.

Connecting Facility Assignment (CFA) Inquiry

This function retrieves a list of channel assignments, design-related information and work authorization information for leased DS1 and DS3 facilities. This inquiry provides data used to verify the status of a connecting facility prior to submitting this information on a local service request.

In the SWBT and PB/NB regions, this function is available via the DataGate and Verigate interfaces. This transaction is not supported in the SNET region.

This transaction is not supported in Ameritech Illinois, and no request has been made of Ameritech Illinois to provide this capability.

Customer Service Information Inquiry

This function retrieves current end user service records. The information provided on the CSI is used to verify existing features and services prior to the submission of a local service request.

In the SWBT and PB/NB regions, the Customer Service Information function allows for retrieval of records by either account telephone number (ATN) or individual working telephone number (WTN), and is available via the EDI/CORBA, DataGate and Verigate interfaces. In the SNET region, this function only supports retrieval using account telephone number via the application to application interface and W-CIWin.

In SWBT region, responses are provided for accounts of up to 5,000 working lines on the application to application interfaces, and for up to 1000 working lines on the GUI. PB/NB provides responses for accounts containing up to 4 megabytes of data, and SNET up to 128 kilobytes of data. Requests for customer service records exceeding these parameters must be submitted to the local service centers for fulfillment.

In the SWBT, PB/NB, and SNET regions, CLECs may retrieve Resale CSI when the end user account is owned by another CLEC.

In Ameritech Illinois, this inquiry may also be performed by either account or working telephone number, and is available through the application to application interface and TCNet. In Ameritech Illinois, responses are provided for accounts up to 20,000 display lines. Requests for customer service records exceeding these parameters must be submitted to the local service centers for fulfillment. Ameritech Illinois does not permit CLECs to view CSI when it is owned by another CLEC.

Data Validation Files

The exchange of information from some of the functionality listed is based on relatively static data. As a result, Data Validation Files are available for the purpose of providing requesting CLECs with an alternate method of acquiring pre-ordering information.

Street Address Guide, PIC/LPIC Codes and Feature/Service availability information is available via File Transfer Protocol (FTP) in the SWBT and PB/NB regions. Access to PIC/LPIC codes and product availability files can also be arranged via Connect:Direct. SNET provides a file containing valid directory yellow page headings downloaded from the CLEC web site.

In Ameritech Illinois, files containing directory names, class of service codes, USOC, community names, yellow page headings, feature/service availability, street address guides, and PIC/LPIC codes are available via Connect:Direct, CD-ROM and TCNet.

Digital Subscriber Loop Pre-qualification Inquiry
This function provides an indication of theoretical loop length and indication of local serving office locations where SBC has deployed ADSL.

In the SWBT and PB/NB regions, this function is available via the DataGate and Verigate interfaces. Also provided in the SWBT region is theoretical 26-gauge loop length and taper code information. This function is not available in the SNET region.

This function is not available in Ameritech Illinois.

Digital Subscriber Loop Qualification Inquiry
This function provides specific, detailed loop make-up information for a loop to a specific address and provides information necessary to determine the suitability of that loop for xDSL services.

In the SWBT and PB/NB service areas, this inquiry is available via the DataGate and Verigate interfaces. Also provided in the SWBT service area is theoretical 26-gauge loop length and taper code information. This inquiry is not available in the Ameritech and SNET service areas.

In all SBC regions, including Ameritech Illinois, loop qualification is a manual process using fax and/or E-mail.

Directory Listing Inquiry
This function is used to retrieve directory listing information associated with an end user telephone account.

The SNET region provides this function via the application to application interface and W-CIWin. This information is available as part of the Customer Service Information function via the EDI/CORBA and DataGate application to application interfaces and the Verigate interface in the SWBT and PB/NB regions.

In Ameritech Illinois, directory listings are available as part of the Customer Service Information function via the application to application interface and TCNet.

Dispatch Inquiry
This function indicates when the dispatch of an SBC technician is required for residential service ordered on a local service request. Dispatch is based on the existence of cut-through facilities and assists the CLEC in determining the due date that may be quoted to the end user.

This function in the SWBT and PB/NB regions is available via the EDI/CORBA, DataGate and Verigate interfaces. In the SNET region, this information is provided as part of the Address Validation function.

In Ameritech Illinois, this information is provided as part of the Due Date Inquiry function.

Due Date Inquiry

This function allows for the identification of available premise visit dates for services to be ordered on a local service request.

In the SWBT and PB/NB regions, this inquiry is available via the EDI/CORBA, DataGate and Verigate interfaces. In the SNET region, the inquiry function is available via the EDI interface and W-CIWin.

All regions return the next available due date. In addition to that date, twenty-seven alternate dates are returned in the SWBT region, and four alternate dates are returned in the SNET region. No alternate dates are returned in the PB/NB region. In the SNET region, a standard interval appropriate to basic local service is returned for non-dispatch orders.

In Ameritech Illinois, inquiry, reservation, confirmation and cancellation functions are supported via the application to application interface. In addition to the next available due date, twenty-nine alternate dates are returned by Ameritech Illinois. In Ameritech Illinois, a non-dispatch, dispatch, or standard interval due date is returned based on available facilities, and customer order parameters.

Feature/Service Availability Inquiry

This function provides for the availability of specific features and services at a particular local serving office switch.

This function in the SWBT and PB/NB regions is available via the EDI/CORBA, DataGate and Verigate interfaces. The SWBT and PB/NB EDI/CORBA interfaces validate the availability of a single feature or service per transaction using the feature/service in USOC format as input. Inquiries via the DataGate and Verigate interfaces return a list of available features/service USOCs retrieved by ten-digit telephone number in the SWBT region. A list of USOCs and associated SOSC codes are retrieved using CLLI or NPA-NXX in the PB/NB region. In the SNET region, a list of available features in terms of SOSC codes is provided via the application to application interface and W-CIWin.

In Ameritech Illinois, this information is provided from a Data Validation file in USOC format, and is available via TCNet.

Network Channel/Network Channel Interface (NC/NCI) Inquiry

This function provides for the validation of Network Channel (NC) and Network Channel Interface (NCI) codes and their combinations prior to submitting a local service request.

In the SWBT and PB/NB regions, this function is available via the DataGate and Verigate interfaces. SNET does not currently support this function.

Ameritech Illinois does not currently support this function. Information regarding valid NC/NCI codes is provided via CLEC ordering documentation on TCNet.

Pending Order Status Inquiry

This function provides access to pending service order status and content prior to the conversion of an end-user account.

Utilizing the DataGate interface in the SWBT region, access to a list of pending service orders is provided by working telephone number. Detailed service order information is provided when an inquiry containing working telephone number and service order number is processed. This functionality is also available in the GUI interface called Order Status for both the SWBT and PB/NB regions. In that GUI, additional search criteria utilizing customer number and purchase order number are available to process a list of pending service orders and detailed service order information. SNET does not currently support this function.

Ameritech Illinois does not currently support this function.

PIC/LPIC Inquiry

This function provides a list of current Primary Interexchange Carrier (PIC) and IntraLATA Primary Interexchange Carrier (LPIC) codes for carriers providing service at a particular local serving office switch.

A list of PIC/LPIC codes is retrieved by ten-digit telephone number via the EDI/CORBA, DataGate and Verigate interfaces in the SWBT region. A list is available by CLLI or NPA/NXX in the PB/NB region. SNET does not currently provide this function.

In Ameritech Illinois, list of PIC/LPIC codes are available using NPA/NXX through the application to application interface and via TCNet. Additionally, this information is available as part of the Data Validation Files.

Telephone Number Availability

These functions allow available telephone numbers to be identified and held for use by a CLEC submitting a local service request:

- Inquiry - Provides a list of available telephone numbers for a given local serving office switch.
- Inquiry/Selection - Provides and holds a list of available telephone numbers for a given local serving office switch.
- Reservation - Allows available telephone numbers to be held until either the receipt of a valid local service request, cancellation of reservation/selection, or the end of a specified holding period.
- Confirmation - Confirms previously reserved or held telephone numbers.
- Cancellation - Allows the release of telephone numbers previously reserved or held.

This function is available in the EDI/CORBA, DataGate and Verigate interfaces in the SWBT region and supports inquiry/selection and cancellation. This function is available in the same interfaces in the PB/NB region and supports inquiry, reservation and cancellation. Via the application to application interface and W-CIWin in the SNET region, this function supports inquiry/selection, and cancellation.

This function is available in Ameritech Illinois via the application to application interface and supports inquiry, reservation, confirmation and cancellation.

The following table summarizes functionality available in each of the SBC regions as of February 2000. Each row represents a function offered in at least one region. Unless otherwise noted, the Interface or GUI access options available by region are shown in the heading.

Function	Existing Functionality and Interface(s) by Region			
	SWBT **EDI/CORBA, DataGate, and Verigate**	**PB/NB** **EDI/CORBA, DataGate, and Verigate**	**SNET** **EDI and W-CIWin**	**Ameritech** **EDI and TCNet**
Address Validation	Numbered, Unnumbered, Unnamed, Descriptive inquiry	Numbered, Unnumbered, Unnamed, Descriptive inquiry	Numbered, Unnumbered, Unnamed, Descriptive inquiry	Numbered, Unnumbered, Unnamed, Descriptive inquiry
	WTN inquiry	WTN inquiry	---	---
Common Language Location Identifier (CLLI)	CLLI inquiry DataGate and Verigate	Information included as part of Feature/Service Availability	Available manually~~7~~	Available manually
Connecting Facility Assignment (CFA)	CFA inquiry DataGate and Verigate	CFA inquiry DataGate and Verigate	---	---
Customer Service Information (CSI)	ATN inquiry	ATN inquiry	ATN inquiry	ATN inquiry
	WTN inquiry	WTN inquiry	---	WTN inquiry
	Up to 5000 lines via app-to-app. Up to 1000 lines via GUI	Up to 4MB	Up to 128KB	Up to 20,000 display lines
Data Validation Files	SAG, PIC/LPIC, Features/Services	SAG, PIC/LPIC, Features/Services	Yellow Page Headings	SAG, PIC/LPIC, Features/Services, Yellow Page Headings, USOCs
	FTP, Direct:Connect, CLEC Web site	FTP, Direct:Connect, CLEC Web site	CLEC Web site	Direct:Connect, CD-ROM, CLEC Online Web site
DSL Loop Pre-qualification	Pre-qualification inquiry DataGate and Verigate	Pre-qualification inquiry DataGate and Verigate	---	---
DSL Loop Qualification	---	---	---	---
Directory Listing	Information included as part of CSI	Information included as part of CSI	ATN inquiry	Information included as part of CSI
Dispatch	Dispatch inquiry	Dispatch inquiry	Dispatch information included in Address Validation inquiry	Dispatch information included in Due Date inquiry

~~7 FCC Uniform and Enhanced Issue #25~~

Function	Existing Functionality and Interface(s) by Region			
	SWBT **EDI/CORBA, DataGate, and Verigate**	**PB/NB** **EDI/CORBA, DataGate, and Verigate**	**SNET** **EDI and W-CIWin**	**Ameritech** **EDI and TCNet**
Due Date	Inquiry Next available due date and 27 alternate dates available Resale and Loop w/ Port	Inquiry Next available due date only Resale and Loop w/ Port	Inquiry Next available due date and 4 alternate dates available Non-dispatch, dispatch or standard interval	Inquiry Next available due date and 29 alternate dates available Non-dispatch, dispatch or standard interval EDI only
	---	---	---	Reservation
	---	---	---	Confirmation
	---	---	---	Cancellation
Feature/Service Availability	Validation by individual Feature/Service EDI/CORBA List of Features/Services via DataGate and Verigate USOCs	Validation by individual Feature/Service EDI/CORBA List of Features/Services via DataGate and Verigate USOCs and SOSCs	List of Features/Services SOSCs	--- Features/Services via Data Validation File and TCNet USOCs
NC/NCI Validation	Validation inquiry DataGate and Verigate	Validation inquiry DataGate and Verigate	---	---
Pending Order Status	Pending inquiry DataGate and Order Status	Pending inquiry Order Status	---	---
PIC/LPIC List	Code inquiry	Code inquiry	---	Code inquiry
TN Inquiry	Inquiry/Selection 5 TNs	Inquiry 5 TNs	Inquiry/Selection 4 TNs	Inquiry 10 TNs EDI only
	---	Reservation 5 TNs	---	Reservation 1 TN
	---	---	---	Confirmation
	Cancellation	Cancellation	Cancellation	Cancellation

B. Ordering

Available Interfaces

Application to application access to Local Service Request (LSR)-based ordering functions is provided to CLECs in all SBC regions via an EDI interface, which is the industry standard means of communication for the ordering of local services. The application to application interfaces in all SBC regions currently run ASC-X12, Version 3072. SWBT, PB/NB and SNET have implemented LSOG Version 2 (plus), TCIF issue 8 whereas, Ameritech Illinois is currently on LSOG Version 2, TCIF issue 7.

Telis, an ASR-based GUI, is utilized in the SWBT, Ameritech and SNET regions for ordering UDT and Interconnection Trunks. Ameritech also allows the use of Telis for ordering Loops. PB/NB provides CESAR/online as an ASR-based GUI, for ordering UDT and Interconnection Trunks and also provides the GUI Customer's Enhanced System for Access Requests – Interconnection Service Requests (CESAR-ISR), for ordering Loops, Number Portability, and Loop with Number Portability.

The LSR Exchange (LEX) system is a GUI available to CLECs for ordering LSR-based services in the SWBT and PB/NB regions. SNET and Ameritech do not offer a GUI for LSR-based ordering.

Telis, an ASR-based GUI, is utilized in the SWBT, Ameritech and SNET regions for ordering UDT and Interconnection Trunks. Ameritech also allows the use of Telis for ordering Loops. PB/NB provides CESAR/online as an ASR-based GUI, for ordering UDT and Interconnection Trunks and also provides the GUI Customer's Enhanced System for Access Requests – Interconnection Service Requests (CESAR-ISR), for ordering Loops, Number Portability, and Loop with Number Portability.

Companies may be on the same version/level of a given guideline, but the implementation may be different. Companies may have implemented some functions or products in advance of standards.

The following table summarizes the ordering application to application interfaces available in the SBC operating regions as of February 2000.

ORDERING	SWBT	PB/NB	SNET	Ameritech
Industry Applications	EDI	EDI	EDI (MSAP)	EDI
LSOG Version	2	2	2	1
TCIF Issue	8	8	8	7
X12 Version	3072	3072	3072	3072
ASR	EXACT	CESAR	EXACT	EXACT
ASOG VER.	21	21	21	21

SWBT, PB/NB and SNET have implemented LSOG Version 2 (plus) with modifications to accommodate certain Version 3 enhancements, such as the move of hunting from the products forms to the LSR form as well as other field changes associated with TCIF issue 8 and developed TCIF/EDI guidelines. Ameritech is currently on LSOG Version 1 (plus), TCIF issue 7, with enhancements to accommodate certain functions and products supported in later LSOG versions.[8]

[8] ~~FCC Uniform and Enhanced Issue 28 (CLOSED)~~

The following table summarizes the ordering GUI interfaces available in the SBC operating regions as of February 2000.

GUIs	SWBT	PB/NB	SNET	Ameritech
LEX	X	X	-	-
LSOG VER.	3	3	-	-
CESAR ISR	-	X	-	-
ASOG VER.	-	21	-	-
TELIS	X	-	X	X
ASOG VER.	21	-	21	21
CESAR Online	-	X	-	-
LSOG VER.	-	NA	-	-

Ordering Message Flows

All SBC regions including Ameritech Illinois utilize the standard 997, 850, 855, 860 and 865 transaction sets for the various functions associated with the EDI ordering of Local Services. Ameritech Illinois also uses the 836 transaction. The following describes the current environment and the differences between the regions.

997 Transaction

All regions currently return a 997 transaction to the CLEC to acknowledge the receipt of a data transmission.

850/855 Transactions

A typical ordering transaction begins with a CLEC sending an 850 transaction. Positive or negative responses are returned to the CLEC via an 855 transaction to communicate the disposition of the request. If the request is error free, a positive response is sent in the form of a Firm Order Confirmation (FOC). If errors are detected, a negative response is sent in the form of error information detail. This process is the same in all regions.

In SWBT and PB/NB, two types of errors, fatal or super fatal, may be encountered in a negative 855 transaction. Fatal errors are the most common and these are corrected by the CLEC sending an 860 transaction. Super fatal errors are such that the request could not be processed due to key fields being invalid or missing. These are corrected by the CLEC by sending another 850 transaction. In SNET, when a negative response is received, regardless of the error type, the request is not processed and corrected 850 transactions are sent by the CLEC until the CLEC receives a positive 855 transaction.

In Ameritech Illinois, when a negative response is received regardless of any error type, the request is not processed and another 850 transaction is sent until the CLEC receives a positive 855 transaction. Additionally in Ameritech Illinois, a Purchase Order Advice is sent via an 855 transaction to acknowledge receipt of a request for Number Portability when more than 50 lines are included.

860/865 Transactions

The 860 transaction is used in all regions for a CLEC to submit a change (supplement) to a request. SWBT, PB/NB and SNET require a "full refresh" of the request, meaning that all unchanged and changed information is included in the supplement.

In Ameritech Illinois, only changed information is submitted on the 860 transaction. CLECs can also use the Supplement Line Activity (SLA) field to define on the supplement order if the line item is an Add item, Delete item, a Replace or a No Change. Ameritech accepts an abbreviated supplement with respect to a Due Date change with a limited subset of fields from a standard order.

Positive or negative responses are returned to the CLEC via an 865 transaction to communicate the receipt and acceptance or rejection of the supplement (860). Again if the request is error free, a positive response is sent in the form of an FOC. If errors are detected, a negative response is sent in the form of error information detail. To correct errors on an 860 transaction, another 860 transaction is sent. This is the same in all regions.

In SWBT and PB/NB, the 860 transaction could also be a response by the CLEC to a negative 855 transaction due to errors on the original request (850).

In Ameritech Illinois, the 855 transaction (FOC) is used to communicate items assigned in response to the CLEC order, such as new telephone number, circuit or hunt group identifiers, and Ameritech service order numbers. In addition to its use as a response to CLEC-issued order supplements, the 865 transaction serves several purposes:

- as an unsolicited transaction may be used to notify CLECs of additional change in data information
- or as an unsolicited transaction to notify CLECs of customer impacting provider initiated changes due to service center identified errors,
- or as a confirmation which may update information such as: assigned telephone numbers, hunt group identifiers, or due dates previously provided as part of the FOC.
- or additionally a Purchase Order Advice is sent via an 865 transaction to acknowledge receipt of a supplement for a change to a request for Number Portability when more than 50 lines are included.

In SWBT, PB/NB, and SNET regions, unsolicited messages are returned to the CLEC via fax or telephone call[9].

The following table provides a summary of the EDI transaction usage on the ordering application to application interfaces in the SBC operating regions.

RECORD TYPE	SWBT	PB/NB	SNET	Ameritech
997	Acknowledgment	Acknowledgment	Acknowledgment	Acknowledgment

[9] ~~FCC Uniform and Enhanced Issue 31b (CLOSED)~~

RECORD TYPE	SWBT	PB/NB	SNET	Ameritech
850	Initial Request	Initial Request	Initial Request	Initial Request and subsequent version +1 until +850[10] is received.
855	• FOC • Error Notice	• FOC • Error Notice	• FOC • Error Notice	• FOC • Error Notice • Purchase Order Advice
860	Supplements: • Initiate Change • Correct Errors on 850 record type • Correct Errors on 860 record type • Full refresh	Supplements: • Initiate Change • Correct Errors on 850 record type • Correct Errors on 860 record type • Full refresh	Supplements: • Initiate Change • Correct Errors on 860 record type • Full refresh on most products	Supplements: • Initiate Change • Changes only on supplement • Correct Errors on 860 record type
865	• FOC • Error Notice	• FOC • Error Notice	• FOC • Error Notice	• FOC • Error Notice • Customer impacting - provider initiated changes • Purchase Order Advice

Product offerings in all service areas were evaluated based on the following criteria: 1) whether the product is offered in a service area; 2) whether an OBF guideline exists for the product; and 3) whether the given product may be ordered electronically.

Many products were offered across all service areas. Other products were available in multiple service areas and in some instances, products were available in only one service area.

Currently in the instances where there are OBF guidelines in place for product families, all service areas utilize OBF standards with minor modifications. Standard LSOG forms are used, however field usage may be different based on service area-specific business rules and requirements. Additional fields may have been introduced in advance of standards. Fields that identify who the customer is, how the request is tracked, and what services and activities are being requested, vary across the service areas.

Some products, such as ISDN, CENTREX, and PBX for Resale and Unbundled Network Elements (UNE), have been implemented using forms designed based on OBF guidelines where possible. Field and data characteristics have been expanded to provide additional information for provisioning of the product.

In some instances, service area-specific ordering requirements have been implemented for both electronic and paper/fax input, and in other instances only paper/fax input is supported.

In the SWBT service area, white page listings for unbundled loops, unbundled switch ports, loop with port combinations, and Resale services can be requested via the current ordering application to

[10] ~~FCC Uniform and Enhanced AT&T Language (AGREED)~~

application and GUI interfaces. Yellow page listings are arranged directly with the directory publisher, Southwestern Bell Yellow Pages, a separate subsidiary of SBC/Ameritech.

In the Ameritech service area white page listings associated with products that include a white page or basic yellow page listing, e.g. resale, unbundled switch ports, and loop with port combinations (Combined Platform Offering-CPO), may be ordered via the current EDI application to application interface. CLECs must establish a business relationship with the appropriate directory listings publisher to provide white page listings for other products such as Unbundled Loops, Local Number Portability, and Loop with Number Portability. CLECs must also establish a business relationship with the appropriate directory listings subsidiary to provide all yellow page listings.[11]

In the PB/NB service area, white page listings for unbundled loops, unbundled switch ports, loop with port combinations, and resale services can be ordered via the current application to application and GUI interfaces. Yellow page listings are arranged directly with the separate directory publishing subsidiary. CLECs also have the capability to enter listing information directly into the Listings Gateway.

In the SNET service area, white page listings for unbundled loops, unbundled switch ports, loop with port combinations, and resale services can be ordered via the current application to application and GUI interfaces. Yellow page listings are arranged directly with the separate directory publishing subsidiary.

[11] ~~FCC Uniform and Enhanced AT&T Language (AGREED)~~

C. Provisioning

Provisioning functions, i.e. those functions used to manage and monitor an order during the period between the order placement and order completion, are provided by various processes in the operating regions that allow a CLEC to keep track of the status of an order. These processes are described below.

Certain provisioning functions are provided via the pre-ordering and ordering interfaces. Those functions that are based on an inquiry/response model, e.g. a CLEC asking for and receiving status on a pending order, are accessed using the pre-ordering interface. Order statuses, such as order completion, are proactively sent to the CLEC as the order is processed. These statuses are provided via the ordering interface.

Functions

Following are the provisioning functions available in the SBC operating regions.

Jeopardy Notification

Jeopardy Notification is used when alerting the CLEC that a situation has been encountered in the provisioning of an order that will potentially cause the confirmed due date to be missed.

These notifications are provided via the transaction message flows in the ordering application to application interfaces in the SWBT and PB/NB regions using the 865 transaction. This same notification is provided via the LEX GUI interface. The SNET region provides this notification via a manual process.

Jeopardy notification is currently provided in Ameritech Illinois via the ordering application to application interface using the 870 transaction. Ameritech also provide unsolicited, non-standard 865 transactions which alert CLECs to due date changes that Ameritech has made to the CLEC local service request[12]. The SNET service area provides this notification via a manual process.

Service Order Completion

Service Order Completion (SOC) is a notification to the CLEC that the work requested on a previously provided purchase order (or request) has been completed.

The SWBT, PB/NB and SNET regions all use the 865 transaction to return a SOC notification via the ordering application to application interface. This notification is also available via the LEX ordering GUI application in the SWBT and PB/NB regions.
Service Order Completion notification is currently provided by Ameritech Illinois via the ordering application to application interface using the 865 transaction.

Loss Notification

[12] ~~FCC Uniform and Enhanced AT&T Language (Agreed)~~

Loss Notification is a notification to the CLEC that a change requested by another Telecommunications Carrier (TC) has been completed and, as a result, the Local Service Provider associated with a given telephone number has been changed.

The SWBT, PB/NB and SNET regions provide equivalent notifications to CLECs using the Carrier Access Record Exchange (CARE) process.

Ameritech Illinois currently provides Loss Notification via the ordering application to application interface using the 836 transaction.

Pending Order Status

This inquiry provides access to a list of pending service orders, and their status and content prior to the conversion of an end-user account, for pre-ordering purposes, and prior to the service order posting in the billing system for monitoring order progress.

Utilizing the DataGate interface in the SWBT region, access to a list of pending service orders is provided by working telephone number. Detailed service order information is provided when an inquiry containing working telephone number and service order number is processed. This function is also available in a GUI named Order Status in both the SWBT and PB/NB regions. In this GUI, additional search criteria utilizing customer number and purchase order number are available to access a list of pending service orders and detailed service order information. CLECs in Ameritech region use an EDI-X12 interface in the form of an 869 transaction to query pending order status with the response coming back to CLEC as an 870 status report[13]. CLECs may monitor the progress of their orders using an Interactive Voice Response (IVR) system made available by Ameritech Illinois. SNET does not presently support this function.

Posted Order Status

This inquiry provides access to posted service order status and content. The information provided represents completed service order status as posted to the billing system.

Access to this information is available in the Order Status GUI for the SWBT region. A list of posted service orders or detailed service order information is provided when an inquiry containing customer number is processed. Detailed service order information is provided when an inquiry containing working telephone number, service order number or purchase order number is processed. PB/NB and SNET do not currently support this function.

This function is not currently available in Ameritech Illinois.

Provisioning Order Status

[13] ~~FCC Uniform and Enhanced CoreComm language (Agreed)~~

This inquiry provides access to the service order provisioning information to determine the pending or dispatched status of a service order. The information provided presents the status of the order, such as whether it has been dispatched or notes regarding the order.

Access to this information is provided via the DataGate interface in the PB/NB region by customer number, service order number or telephone number. Access to this information is also available via the GUI named Provisioning Order Status for both the SWBT and PB/NB regions. SNET does not currently support this function.

This function is not currently available in Ameritech Illinois.

The following table summarizes the provisioning functions available in the SBC as of February 2000.

RECORD TYPE	SWBT	PB/NB	SNET	Ameritech
865	• SOC • Jeopardy Notice	• SOC • Jeopardy Notice	• SOC	• SOC
869	NA	NA	NA	• Pending Order Status Inquiry
869	NA	NA	NA	• Pending Order Status Inquiry
870	NA	NA	NA	• Jeopardy Notice • Pending Order Status Response
836	• N/A – Handled via CARE process	• N/A – Handled via CARE process	• N/A – Handled via CARE process	• PIC/LPIC Loss Notification
Proprietary Message Event via DataGate	• Pending Order Status	• Provisioning Order Status	NA	NA
Graphical Data Provided via the Order Status and Provisioning Order Status GUIs	• Pending Order Status • Provisioning Order Status • Posted Order Status	• Pending Order Status • Provisioning Order Status	NA	NA
Alternative Methods			• Jeopardy Notice (provided manually)	• Pending Order Status (via IVR)

The following lists pre-order, order, and provisioning interfaces available by SBC region as of April 2000. This also includes the backend systems to which CLECs have access. [14]

SYSTEM	SWBT	PB/NB	SNET	Ameritech	Proprietary /Retail	Interface Function
GUI INTERFACE						

[14] ~~FCC Uniform and Enhanced Issue 26, 27, 30, and 33. (CLOSED)~~

Order Status	X	X		X		Provisioning
POS	X	X				Provisioning
EASE/BEASE	X				X	Preorder/Order
Starwriter		X (PB only)			X	Preorder/Order
CCTools / W-CIWin			X		X	Preorder/Order
CESAR On-line		X				Preorder/Order
CPSOS-Prequal (SWB)	X				X	Preorder
TCNet Preorder				X		Preorder
Verigate	X	X				Preorder
3B			X		X	Order
LEX	X	X				Order
PBSM		X			X	Order
W-SNAP			X		X	Order
GATEWAY INTERFACE						
MSAP			X			Preorder/Order/ Maint& Repair
EDI Preordering	X	X		X		Preorder
CORBA	X	X				Preorder
DataGate	X	X				Preorder
CESAR		X				Order
EXACT	X					Order
EDI Ordering	X	X		X		Order
E911 Gateway		X				Order
LIDB	X	X	X	X		Order
Listings Gateway		X				Order
RMI (Resale Mechanized Interface)		X				Order
DIRECT ACCESS						
PREMIS (PACBELL)		X			X	Preorder
SORD	X	X			X	Preorder/Order/ Provisioning
OTHER						
Telis				X		Order

A. Maintenance and Repair

Available Interfaces

All SBC regions including Ameritech Illinois offer application to application and GUI maintenance and repair interfaces. Ameritech, PB/NB, and SWBT all support application to application interfaces for Electronic Bonding Trouble Administration (EBTA) based on the American National Standards Institute (ANSI) Standards. SNET offers a non-standard application to application interface, MSAP, to support maintenance and repair functions.

All regions in SBC have developed their own GUI interface. Each GUI supports various functions with different presentations to the end user.

PB/NB offers Pacific Bell Service Manager (PBSM). It allows a customer to: Create a trouble report, view trouble history, retrieve trouble status and perform MLT tests on Resale POTS and loop with port.

SWBT offers Toolbar/Trouble Administration. It allows a customer to: Create a trouble report, view trouble history, retrieve trouble status and perform MLT tests on Resale POTS and loop with port.

SNET offers CCTools, that allows a customer to view trouble history and retrieve trouble status for resale POTS products.

Ameritech Illinois offers EBTA II GUI. It allows a customer to: Create a trouble report, view status history, receive proactive status, clear and close trouble reports. It provides similar functionality to the application to application interface.

The following table is a summary of the maintenance and repair application to application and GUI interfaces in the various SBC regions.

SYSTEM	SWBT	PB/NB	SNET	Ameritech
APP-TO-APP	System: Electronic Bonding –TA T1.262:1998 (Release 4.5 8/99) T1.227A (Release 5.1 10/99) T1.228:1995 T1.227:1995 Release 4.1.0	System: Electronic Bonding – TA T1.262:1998 (Release 4.5 8/99) T1.227:1995 T1.227A (Release 5.1 Oct/99) T1.228:1995 Release 4.1.0	System : MSAP EDI format Release: N/A	System: Electronic Bonding –TA T1.227:1995, T1.227a:1998 T1.228:1995 Release: 5.0
GUI	System: Toolbar / TA Create Trouble Reports MLT Test POTS / loop with port View trouble history View status View trouble report list. Clear and Close GUI-Windows Based Release 5.1.0	System: PBSM Create Trouble Reports MLT Test POTS / loop with port View trouble history View status View trouble report list. Telnet –VT100 Terminal Emulation Release: 8.3	System: CCTools View trouble history View status GUI-Windows based Release: NA	System: EBTA II GUI Create Trouble Reports View status history Receive status View status View trouble report list. Clear and Close GUI-Windows Based Release: 1.0

The following table shows the business functions that can be performed by the various regional GUIs. The business functionality and the screen designs are different for each region. In most cases the information entered into the fields on the GUI is mapped to data fields in the back end Operating Support Systems (OSS).

FUNCTION	SWBT (TOOLBAR –TA)	PB/NB (PBSM)	SNET (CCTOOLS)	Ameritech (EBTA GUI)
Create				
Circuit Types (Telcordia valid circuit ids)	Yes	Yes	No	Yes
Access Hours (test and premise access hrs)	Yes	Yes	No	Yes
Narrative	Yes	Yes	No	Yes
Trouble Type	Yes	Yes	No	Yes
Dispatch Authorization	Yes	Yes	No	Yes
Contact information	Yes	Yes	No	Yes
TSP Priority	No	No	No	Yes
Status Interval	No	No	No	Yes
Comments /Notes	No	No	No	Yes
Cancel	No	No	No	Yes
Modify info after create	No	No	No	Yes
Messaging	Yes	Yes	No	Yes
Get Status (refresh)	Yes	Yes	Yes	Yes
Modify	No	No	No	Yes
Proactive Statusing	No	No	No	Yes

Escalations	No	No	No	Yes
Clear / Close	No	No	No	Yes
History	Trouble	Trouble	Trouble	Ticket Status
MLT Test	Yes	Yes	No	No
Status notification	No	No	No	Yes
Estimated Repair Time	No	No	No	Yes
WEB Version	No	No	No	Yes
Circuit Security Supports MCN, ACNA, or CCNA	Yes	Yes	No	Yes (not MCN)
Close out Narrative	Yes	Yes	No	Yes
Circuit Inventory *	Yes	No	No	No
Binding Post **	No	Yes	No	No

*Circuit Inventory is a GUI service provided in the SWBT service area which allows a user to enter a partial designed circuit ID and receive a list of up to 125 matches.

**Binding Post is a GUI service available in PB to provide PB terminal binding post information. PB provides terminal access to CLECs instead of NIDs.[15]

A. Billing

The CLEC billing interfaces have been organized into four categories:

- Bill Data Tape (BDT)
- Exchange Message Interface (EMI) Daily Usage
- Electronic Data Interchange (EDI)
- Online Viewing/GUI

Bill Data Tape (BDT)

All SBC regions, provide CLECs with billing data related to their purchase of unbundled network elements (UNEs). The primary billing vehicle for billing UNEs is Carrier Access Billing System (CABS), which produces the BDT file format. All regions adhere to the same CABS Billing Output Specifications (BOS) national standards for bill media, software version control, user documentation, and user notification. Additionally, all regions provide BDT data on comparable output mediums that include electronic transmission and tape.

All the SBC/Ameritech service areas use Billing Output Specifications (BOS) developed guidelines. A 'differences list' is produced with each BDT change outlining where and why a service area may deviate from standards. Only those BDT records that are applicable to a given service area are produced by that service area. Additionally, any fields on a record that do not apply to a service area are populated with a default value.

Three months prior to the first possible implementation of a change to the Billing Data Tape, a letter is sent to the customers identifying the changes and any deviations from standards. This is standard across all service areas.

[15] ~~FCC Uniform and Enhanced Issue 156 (CLOSED)~~

There are other differences in the BDT records produced for CLECs across the SBC regions, but these are due largely to region-specific tariff and contracts and will continue to exist until such time as cross-region tariffs and contracts are negotiated.

Exchange Message Interface (EMI)

SBC has a responsibility to provide CLECs with usage messages that may be used in the billing of their end-customers. The CLECs receive usage files containing EMI records that provide the billing details for individual messages. The four SBC regions follow industry-accepted Ordering and Billing Forum (OBF) EMI format for message exchange.

At the inception of local exchange competition, all Incumbent Local Exchange Carriers (ILECs) independently worked with CLECs to interpret the application of the OBF EMI guidelines, due to lack of complete and definitive industry guidelines. These region-specific interpretations resulted in the population of EMI records that currently differ somewhat amongst the SBC regions.

Ameritech Illinois provides notification of changes in EMI record formats through its TCNet web site 45 days in advance of implementation. Other SBC regions provide this notification via the Accessible Letter process 60 days in advance.

Existing Functionality by Service Area				
Function	**SWBT**	**PB/NB**	**SNET**	**Ameritech**
Bill Media & Version *EMI records sent to CLECs in Daily Usage Extract:*				
Header/Trailer	20-20-01/02 20-21-01/02 20-24-01/02	20-21-01/02 20-21-09/10	20-21-01/02	20-24-01/02
Toll	10-01-01	10-01-01	10-01-01 *Operator handled only	10-01-01
Specialized Services - Custom calling features	10-01-18	10-01-18	10-01-18	10-01-18
New Class feature record	n/a	10-01-19	n/a	n/a
Local	10-01-31	10-01-31	10-01-31	10-01-31
D/A	10-01-32	10-01-32	10-01-32	10-01-32
Operator Verification	10-01-35	10-01-35	10-01-35	10-01-35
Operator Interrupt	10-01-37	10-01-37	10-01-37	10-01-37
Credits	03-01-01	41-xx-xx 03-01-01	03-01-01	41-xx-xx
Switched Data services	01-01-62	n/a	01-01-62	n/a
UNE Specific Records: CABS MTS, Terminating IntraLATA UNE				

Existing Functionality by Service Area				
Function	**SWBT**	**PB/NB**	**SNET**	**Ameritech**
UNE Originated, International Terminated	11-01-01	11-01-01	n/a	n/a
Terminating Local UNE	11-02-01	n/a	n/a	n/a
D/A (carrier involved)	11-01-31	n/a	n/a	n/a
Terminating Access	11-01-32	n/a	n/a	n/a
Originating 800	11-01-20	n/a	n/a	n/a
Originating 500	11-01-25	11-01-25	n/a	n/a
	11-01-26	n/a	n/a	n/a
Guidelines	• Follows the industry accepted OBF EMI format for message exchange.	• Follows the industry accepted OBF EMI format for message exchange.	• Follows the industry accepted OBF EMI format for message exchange.	• Follows the industry accepted OBF EMI format for message exchange.
Delivery Media	• Tape • Connect: Direct • Dial Up	• Tape • Connect: Direct	• Connect: Direct	• Tape • Connect: Direct • Dial Up
User Guide – media offer on	SWBT/Inter-industry web site or Email from Account Manager	PB/NB has a CLEC handbook that is available on-line to the CLECs on the internet.	CLEC Guide published via internet. It is routinely maintained	The Ameritech user guide is offered on the internet.
User Guide – Publication notification process	CLECs are notified through an accessible letter 60 days in advance of any changes to EMI records that could impact them	CLECs are notified through an accessible letter 120 days in advance of any changes to EMI records that could impact them	CLECs are notified through an accessible letter 60 days in advance of any changes to EMI records that could impact them	CLECs are notified by letter at least 45 days prior to any change in the EMI records that could impact them. Changes are posted to the TCNet web site.

Electronic Data Interchange (EDI)

All SBC regions provide CLECs with billing information that originates from their core retail billing systems representing primarily the Resale of local exchange service. Currently, SWBT and PB/NB provide this billing information following the EDI 811, version 4010 telecommunications industry guidelines for billing transactions. The other two regions, Ameritech and SNET, are currently providing Resale billing information under a Telcordia (Bellcore) standard, the AEBS 450.

Online Viewing/GUI

SWBT offers a GUI application, Bill Info, as part of its desktop Toolbar that provides on-line access to billing information. This application provides on-line access to the image of the CLEC's rendered bill\

Online Viewing of Resale and UNE bill images is not available in the other SBC regions, including Ameritech Illinois.

The table below summarizes the currently available interfaces, versions and bill delivery methods previously described.

Billing	SWBT	PB/NB	SNET	Ameritech
EMI	Record Format: EMR/EMI	Record Format: EMR/EMI	Record Format: EMR/EMI	Record Format: EMR/EMI
(for Daily Usage Delivery)	Transmit to CLEC	Transmit or tape to CLEC.	Transmit to CLEC.	Transmit or tape to CLEC by State.
BDT	System: CABS	System: CABS	System: CABS	System: CABS
	Standard/Format: Bill Data Tape (BDT)	Standard/Format: Bill Data Tape (BDT)	Standard/Format: Bill Data Tape (BDT)	Standard/Format: Bill Data Tape (BDT)
	Version 32	Version 32	Version 32	Version 32
EDI/AEBS	System: Electronic Data Interchange Billing (EDIB)	System: Electronic Data Interchange Billing (EDIB)	System: Customer Records & Information System (CRIS)	System: Ameritech Billing Management System (ABMS)
	Standard: EDI 811	Standard: EDI 811	Standard: Bellcore Mag Billing Tape Plan	Standard: Bellcore Mag Billing Tape Plan
	Record Format: 4010	Record Format: 4010	Record Format: AEBS 450	Record Format: AEBS 450
	Same Info as Paper Bill	Same Info as Paper Bill	Detail Supporting Summary Paper Bill	Detail Supporting Summary Paper Bill
	Transmit to CLEC	Transmit to CLEC	Magnetic Tape or Cartridge	Transmit to CLEC or Alternative Media
Online Viewing	System: TOOLBAR/Bill Info Function: CLEC can view Resale & UNE bill including payments/adjustments, CSR, and Subscription reports.	None	None	None

Product Billing System Alignment

Initial decisions on the system most appropriate to bill wholesale local exchange services were based largely on each individual service area's existing system attributes. Despite being developed on different platforms, the resulting billing outputs utilize consistent formats (e.g., EDI or BDT) across the service area.

Billing systems for the Unbundled Network Elements (UNEs) across the four service areas are in alignment, with the exception of Ameritech's Line-Side Ports. Ameritech bills the Line-Side Port through the Ameritech Customer Information System (ACIS), a CRIS-like billing system, where other service areas bill through CABS. The unbundled products offered by Ameritech utilizing Line-Side Port and billed through ACIS include Unbundled Local Switching, Shared Transport, and Combined Platform Offering (i.e., UNE-Platform).

Billing for all Resale products across the four service areas are in alignment.

The table below summarizes the existing product billing system alignment.

Product Billing System Alignment by Service area				
Product	**SWBT**	**PB/NB**	**SNET**	**Ameritech**
Resale Residence Basic Exchange	CRIS	CRIS	CRIS	ACIS/RBS
Resale Business Basic Exchange	CRIS	CRIS	CRIS	ACIS/RBS
Resale Complex Business	CRIS	CRIS	CRIS	ACIS/RBS
Interim Number Portability	CABS	CABS	CABS	ACIS/RBS
UNE - Port	CABS	CABS	CABS	LINE: ACIS; TRUNK: CABS
UNE – Loop	CABS	CABS	CABS	CABS
UNE – Loop with Number Portability	CABS	CABS	CABS	INP: ACIS; LOOP: CABS
UNE – Loop with basic Port	UNE facility and Local Usage – CABS; Toll and DA - CRIS[16]	CABS	Not Supported	No Product
Unbundled Dedicated Transport	CABS	CABS	CABS	CABS
Blended/ Shared Transport	CABS	CABS	CABS	ACIS/RBS

[16] ~~FCC Uniform and Enhanced Issue 36 (CLOSED)~~

A. Connectivity

Although all regions within SBC currently offer CLECs connectivity to OSS, there are some differences in the form of connectivity offered, the type of facility utilized, and the ownership and maintenance of connectivity equipment.

In both its SWBT and PB/NB regions, SBC currently has Remote Access Facilities (RAFs) that are solely dedicated for CLEC use in accessing SBC's OSS. The SWBT facility, known as the LRAF, is located in Dallas, Texas, while the PB/NB facility, called the PRAF, is centered in Fairfield, California.

Both the LRAF and PRAF are configured with a number of routers capable of terminating private line and frame relay connections and with access servers to terminate analog modem and ISDN dial-up connections. These terminating routers and access servers are connected to a Local Area Network (LAN) which in turn provides for connectivity to the SBC network "firewall" systems. These secured firewalls use access lists to prevent unauthorized entry into other internal SBC systems that are outside the scope of those OSS offered to CLECs.

Routers for the LRAF and PRAF are provided and maintained by SWBT and PB/NB. CLECs provide their own circuit, Data Service Unit/Channel Service Units (DSU/CSUs), connectors and cables. Specifications are given to the CLEC for the DSU/CSUs (to be placed on both ends of the CLEC provided circuit) and as well as circuit line coding and framing parameters.

SNET currently allows access to its OSS via their New Haven, Connecticut network connectivity location, but does not maintain a separate facility dedicated just for CLEC use. Private line and shared frame relay connections are allowed, but dial-up access is not available. CLECs must provide and maintain their own router and CSU/DSU. Hence, CLECs are given access to SNET's premises to install and maintain their own equipment. As part of the SNET merger initiative, work was done during 1999 to establish a dedicated facility (to be called the SRAF) for CLEC use within the SNET region. The building and testing of the private line and frame relay portion of the SRAF is slated to take place during the first quarter 2000, with plans to secure and install the addition of access servers to terminate analog modem and ISDN dial-up connections shortly thereafter.

CLEC connectivity to most of Ameritech's OSS is via private line or frame relay. However, some applications are accessed via the Internet, where security is provided via the use of Digital Certificates. For private line or frame relay connections, CLECs must provide their own CSU/DSU which is then installed and maintained by Ameritech personnel. Ameritech Illinois provides connectivity to its OSS via either Ameritech's Chicago, Illinois or Southfield, Michigan Electronic Commerce Network (ECN) rather than through a separate facility dedicated for CLEC use.

Currently in Ameritech there is no formal policy limiting the number of IP addresses or EDI Trading Partner IDs. At SNET, x400 addresses are used along with EDI Trading Partner IDs. While there are currently no set limits on any of these addresses or IDs, coding changes may be required with SNET's interfaces to accommodate expansion beyond the multiples currently in use. In the SWBT and PB/NB regions, the current limitation is one IP address + port combination, per CLEC ID (EDI Trading Partner ID or NDM User ID), per business function, (i.e., Pre-Ordering, Ordering, etc.), per environment (Production or Test). After a CLEC has contracted their Account Manager regarding

access to electronic interfaces, documentation containing connectivity information is provided. Ameritech uses the ESO Guide, SNET has their CMIS document, and SWBT, PB, and NB use the CLEC OSS Interconnection Procedures document. Meetings with connectivity SMEs take place and the appropriate OSS Customer Support personnel assist CLECs in establishing and testing connectivity.

CLEC-A (Production environment using Interactive Agent)

Trading Partner ID	Business Function	CLEC IP
ID#1-Pre	Pre-order	IP#1 port 6998
ID#1-Ord	Ordering	IP#1 port 6999

CLEC-A (Testing environment using Interactive Agent)

Trading Partner ID	Business Function	CLEC IP
ID#2-Pre	Pre-order	IP#2 port 6998
ID#2-Ord	Ordering	IP#2 port 6999

While most CLEC's elect to use a different set of ID and IP combinations for testing, it is not a requirement. As noted above, currently in Ameritech there is no formal policy limiting the number of IP addresses and the table above may not be fully descriptive of the Ameritech environment. It is possible in Ameritech to have multiple Trading Partner IDs and IP addresses in production.